

Application No.: 09/588,242

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Docket No.: 249212024500

REMARKS/ARGUMENTS

In an Office Action dated September 22, 2003, claims 1-38 were rejected. By this amendment, claims 1, 3, 9, 11, 16-18, 20, 21, and 33 have been amended. Claim 2 has been canceled. Claims 1, 3-38 remain pending. Applicants request reconsideration of the pending claims in view of the present amendment and following remarks.

I. Specification**A. Abstract**

In the Office Action, the Examiner objected to the Abstract because "loose" in line 1 should be changed to "lose." By this amendment, the Abstract has been amended.

B. Title

In the Office Action, the Examiner objected to the Title as not being descriptive. By this amendment, the Title has been amended.

II. Claim Rejections – 35 USC 112**A. Claim 2**

In the Office Action, the Examiner rejected claim 2 under 35 USC 112, first paragraph. By this amendment, claim 2 has been canceled.

B. Claim 3

In the Office Action, the Examiner rejected claim 3 under 35 USC 112, second paragraph. In particular, the Examiner inquired as to whether a word was omitted after "for." By this amendment, claim 3 has been amended to include the word "providing" after "for."

III. Claim Rejections – 35 USC 102**A. Claims 1-3, 5-13, 20-23, 25, 27-33, and 35-37**

In the Office Action, the Examiner rejected claims 1-3, 5-13, 20-23, 25, 27-33, and 35-37 under 35 USC 102(e) as being anticipated by US Patent No. 6,180,063 (the Golding reference).

1. Claim 1

By this amendment, claim 1 has been amended, in part, to recite, "wherein the circuit queues log entries and periodically sends one or more of the queued log entries to the storage." Claim 1 also recites, "a storage for accepting log entries from the circuit." Applicants assert that the Golding reference does not disclose these claim elements.

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In particular, with reference to Figure 1, logs in disks 20 and 30 store write messages with time stamps. After a sufficient time interval, data in the logged message is stored in storage medium 21 or 31. (See column 3, lines 66 – column 4, line 2.) Thus, in the Golding reference, the write messages with time stamps are only stored in logs in the disks, while only data is stored in the storage media.

In contrast, as noted above, claim 1 recites that “the circuit queues log entries and periodically sends one or more of the queued log entries to the storage.” Therefore, Applicants assert that the Golding reference does not anticipate claim 1.

2. Claims 2-3, 5-8

As noted above, claims 2 has been canceled. Applicants assert that claims 3, 5-8 are allowable for at least the reason that they depend from an allowable independent claim.

3. Claim 9

By this amendment, claim 9 has been amended, in part, to recite, “queuing log entries in a log queue” and “writing log entries from the log queue into a log file.” As discussed above with regard to claim 1, in the Golding reference, the write messages with time stamps are only stored in logs in the disks, while only data is stored in the storage media. Therefore, Applicants assert that the Golding reference does not anticipate claim 9.

4. Claims 10-13

Applicants assert that claims 10-13 are allowable for at least the reason that they depend from an allowable independent claim.

5. Claim 20

By this amendment, claim 20 has been amended, in part, to recite, “queue log entries in a log queue” and “write log entries from the log queue into a log file.” As discussed above with regard to claim 1, in the Golding reference, the write messages with time stamps are only stored in logs in the disks, while only data is stored in the storage media. Therefore, Applicants assert that the Golding reference does not anticipate claim 20.

6. Claim 21

By this amendment, claim 21 has been amended, in part, to recite, “queuing log entries in a log queue.” Claim 21 also recites, “storage for accepting log entries from the log

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queue." As discussed above with regard to claim 1, in the Golding reference, the write messages with time stamps are only stored in logs in the disks, while only data is stored in the storage media. Therefore, Applicants assert that the Golding reference does not anticipate claim 21.

7. Claims 22-23, 25, 27-32

Applicants assert that claims 22-23, 25, 27-32 are allowable for at least the reason that they depend from an allowable independent claim.

8. Claim 33

Claim 33 recites "queuing log entries at the log-assisted disk" and "storing the log entries in a log file at the mass storage system." As discussed above with regard to claim 1, in the Golding reference, the write messages with time stamps are only stored in logs in the disks, while only data is stored in the storage media. Therefore, Applicants assert that the Golding reference does not anticipate claim 33.

9. Claims 35-37

Applicants assert that claims 35-37 are allowable for at least the reason that they depend from an allowable independent claim.

B. Claim 17

Claim 17 was rejected under 35 USC 102(b) as being anticipated by US Patent 5,008,786 (the Thatte reference).

By this amendment, claim 17 has been amended, in part, to recite, "accepting a snapshot of the state of a mass storage device taken at a point in time earlier than the given time." Claims 17 has also been amended, in part, to recite, "writing the log entries having timestamps later than the point in time of the snapshot to the storage device." Applicants assert that the Thatte reference does not disclose these claim elements.

In particular, as set forth in the Abstract, the Thatte reference discloses taking periodic checkpoints, and when a system failures occurs, rolling the system back to the checkpointed state. A portion of the section cited by the Examiner, column 17, lines 30-33 states, "[t]hen the state of the machine is rolled back to the state corresponding to the last checkpoint by restoring the processor registers from the snapshot object." Note, with reference to Fig. 8, the step of restoring the

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processor registers from the snapshot object, which corresponds to "RESTORE THE SNAPSHOT" in Fig. 8, takes place moving back in time from the system crash to the time of the checkpoint.

In contrast, as noted above, claim 17 recites, "writing the log entries having timestamps later than the point in time of the snapshot to the storage device." Therefore, Applicants assert that the Thatte reference does not anticipate claim 17.

IV. Claim Rejections – 35 USC103

A. Claims 4 and 26

Claims 4 and 26 were rejected under 35 U.S.C. 103(a) as being unpatentable over the Golding reference. Applicants assert that claims 4 and 26 are allowable for at least the reason that they depend from allowable independent claims.

B. Claim 14

Claim 14 was rejected under 35 USC 103(a) as being unpatentable over the Golding reference and US Patent No. 5,943,672 (the Yoshida reference).

Claim 14 ultimately depends from independent claim 9. In contrast to the Examiner's assertion, for the reasons set forth above for claim 9, Applicants assert that the Golding reference does not teach all other limitations of claim 9. Therefore, Applicants assert that the combination of the Golding reference and Yoshida reference does not make obvious claim 14.

C. Claims 15 and 34

Claims 15 and 34 were rejected under 35 USC 103(a) as being unpatentable over the Golding reference and US Patent No. 6,182,198 (the Hubris reference).

Claims 15 and 34 depend from independent claims 9 and 33, respectively. In contrast to the Examiner's assertion, for the reasons set forth above for claims 9 and 33, Applicants assert that the Golding reference does not teach all other limitations of claims 9 and 33. Therefore, Applicants assert that the combination of the Golding reference and Hubris reference does not make obvious claims 15 and 34.

D. Claims 16 and 38

Claims 16 and 38 were rejected under 35 USC 103(a) as being unpatentable over the Golding reference and US Patent No. 5,403,639 (the Belsan reference).

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Claims 16 and 38 depend from claim 9 and 33, respectively. In contrast to the Examiner's assertion, for the reasons set forth above for claims 9 and 33, Applicants assert that the Golding reference does not teach all other limitations of claims 9 and 33. Therefore, Applicants assert that the combination of the Golding reference and Belsan reference does not make obvious claims 16 and 38.

E. Claim 18

Claim 18 was rejected under 35 USC 103(a) as being unpatentable over the Thatte reference and Golding reference.

Claim 18 depends from claim 17. In contrast to the Examiner's assertion, for the reasons set forth above for claim 17, Applicants assert that the Thatte reference does not teach all other limitation of claim 17. Therefore, Applicants assert that the combination of the Thatte reference and Golding reference does not make obvious claim 18.

F. Claim 19

Claim 19 was rejected under 35 USC 103(a) as being unpatentable over the Thatte reference and Golding reference.

Claim 19 ultimately depends from claim 17. In contrast to the Examiner's assertion, for the reasons set forth above for claim 17, Applicants assert that the Thatte reference does not teach all other limitation of claim 17. Therefore, Applicants assert that the combination of the Thatte reference and Golding reference does not make obvious claim 19.

G. Claim 24

Claim 24 was rejected under 35 USC 103(a) as being unpatentable over the Golding reference and US Patent 5,819,020 (the Beeler reference).

Claim 24 ultimately depends from claim 21. In contrast to the Examiner's assertion, for the reasons set forth above for claim 21, Applicants assert that the Golding reference does not teach all other limitations of claim 21. Therefore, Applicants assert that the combination of the Golding reference and Beeler reference does not make obvious claim 24.

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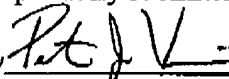
V. Conclusion

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 249212024500. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

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